**** Sebago Region Fisheries Newsletter****

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Current and past editions of our newsletter, as well as pictures of fish caught in the region may be viewed on the Department's home page (www.MEFISHWILDLIFE.com)

Sebago Region Fisheries Newsletter Discontinued

READERS PLEASE TAKE NOTE: Region A biologists have been producing 2 editions of the Sebago Region Fisheries Newsletter each year for the last 11 years in an effort to educate anglers on regional and statewide management initiatives. For various reasons, this regional newsletter will be discontinued and this edition is the last. However, a new Fisheries Division newsletter will now be produced annually and the first edition will soon be available on the Departments web site (www.mefishwildlife.com). This statewide newsletter will include contributions from all seven fisheries management regions.

Sebago Lake Pike Introduction - Threat Analysis

The Department recently developed a new assessment for biologists to use as a first step in responding to new illegal/invasive fish introductions. Completion of the associated data form provides a basis to assess risks, threats, and the possibility for remediation within the infected water/drainage.

With evidence that pike are spawning successfully in Sebago Lake as of two years ago, it is apparent pike are now a permanent resident of Sebago Lake. A threat analysis was developed for the Sebago pike infestation last winter. Upon completion it became apparent we lacked current information on outlet dams on headwater lakes and ponds, so this information was collected throughout last field season. All waters where pike could migrate to establish new seed sources and adversely impact additional fisheries were considered in this assessment. Trickey Pond and Peabody Pond were identified as the highest concern for potential introduction. Both waters provide popular high quality fisheries for landlocked Atlantic salmon. We are currently exploring exclusion barrier options at two sites associated with Trickey Pond; the outlet dam, and the next downstream road crossing. Fortunately, the existing drop at the outlet dam offers some deterrent to pike migrating up from the Muddy River. Peabody Pond drains to Sebago Lake via the Northwest River. Wetlands associated with this river offer abundant juvenile habitat for northern pike and if established would create another contributing source of pike recruitment to Sebago. The outlet dam on Peabody Pond is in a state of disrepair and may allow pike to migrate into the pond, if pike gained access the Northwest River. The best defense against the natural movement of pike from Sebago into the Northwest River and Peabody Pond is Shute's Dam at the mouth of the Northwest River. An existing fishway at this dam is in a state of disrepair. In its current condition, the fishway precludes use by northern pike. At this time, we will discourage any improvements to the Shute's Dam fishway that would allow pike to migrate further upstream. Although the North-West River has historically provided some limited juvenile salmon production, contribution to Sebago's Lake Fishery is insignificant in comparison to salmon production in the Crooked River, which essentially sustains the Lake's wild salmon fishery.

Sebago Lake Fishing update

According to Carroll Cutting, proprietor of Jordan's Store in Sebago, ex-MDIFW advisory council member, long time angler, and a most genuine person, the salmon fishing in 2007 on Sebago was some of the best he has ever seen on the lake over the last 3 - 4 decades. This credible observation is certainly a testament to the improving fishery. Salmon in the 3 to 7 pound size range were the norm, particularly during the annual spring flurry that coincides with the smelt spawning run. Catches of 6 to 12 salmon per trip were reported from experienced anglers through the month of July.

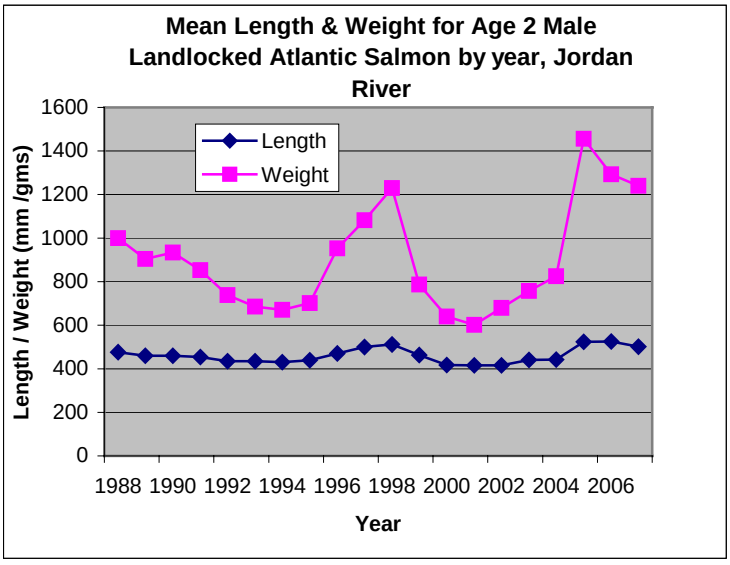
For management purposes, we refer to the 1988 fishery as a historical "bench mark", representing what anglers would like to see reestablished in the lake. The salmon fishing this past season appears to have exceeded the 1988 level, at least in terms of size quality. An active creel survey was not conducted in 2007, so no formal assessment of angler catch rate was undertaken. These overall positive changes in the salmon fishery, as well as reported improvements in lake trout size quality have been well received by lake fishermen.

The Jordan River fish trap captured 161 adult stocked salmon, which is up considerably from previous years. Three age classes (2, 3, 4) were well represented, as well as a small number of 5 year olds. This relatively broad age class distribution indicates good lake survival and has

Brian Lewis holding a 7 lb Sebago salmon, 2007

allowed salmon to grow as large as 8 pounds. Age 3 stocked salmon were as large as 6 to 7 pounds, although some that didn't grow and/or were injured were as small as 2 pounds.

Age 2 and 3 male salmon collected at the Jordan River Fish trap are monitored annually to assess trends in mean growth and size. As for the Age 2 salmon, this past fall and the prior 2 years have produced salmon that exceeded that observed in 1988, with a slight reduction in mean size in 2007 from that observed in '06 and '05 (see chart below). Age 3 salmon have exceeded 1988 size quality standards for the past 4 years, although this age group is slightly smaller on average than the previous 2 years.



A mechanical problem with the hydroaccoustic boat prevented the completion of a smelt survey in 2007 to estimate smelt abundance. However, a robust spring spawning run in the Songo and Crooked rivers, and anecdotal reports from lake anglers suggest good numbers of smelt present in the lake. Prior to 2007, the smelt population has been steadily and rapidly increasing since 2001.

These noteworthy changes in the recovery of Sebago's salmon fishery are very encouraging, however, fish populations are also very dynamic. Therefore, we propose to maintain a conservative and methodical approach to assessing annual salmon stocking rates to meet fishery management goals. For example, Age 2 male salmon in 2007, while exceeding 1988 benchmark size/growth levels, have also experienced slight decline in performance over the last two years. While some year-to-year variability in performance is expected, we want to be sure we don't compromise recovery efforts by stocking too many salmon too soon, and must also consider potentially significant annual contributions of wild salmon to the lake fishery. Wild salmon supported the bulk of the excellent fishing experienced on Sebago in 2007, and while stocking hatchery fish is expected to continue in Sebago's future, conservative stocking practices will provide greater assurances that a sustainable and desirable fishery can be maintained.

Sebago Lake Fisheries Management Plan

In response to the designation of Sebago Lake as a Classic Salmon Water, we have developed a draft written fisheries management plan for Sebago. And without question, salmon are the focus under the draft plan. In fact, other fisheries are not addressed in the plan, with the exception of those species (i.e., togue, smelt, invasive species) that strongly influence salmon management.

Since the initial draft plan was developed we have invited and received input from various fishing groups, including Sebago Lake Anglers Association, Windham/Gorham Rod & Gun Club, Sebago Chapter of Trout Unlimited, as well as the Sportsmen's Alliance of Maine. At the time of this writing we are also anticipating comments from Pine Tree Fish & Game Club. Once formal comments have been submitted from the organized fishing clubs, comments will be discussed (at a public meeting) and where appropriate incorporated into the draft plan. Comments have been largely positive to date. Once this task is complete a copy of the draft plan will be added to the Department's website for public review and comment.

Based on the draft plan several regulation proposals have already been proposed by Sebago Lake Anglers Association, and in concept embraced by us. The final language is still being developed, but in essence the proposals would:

- Allow open water anglers to catch and keep togue from April 1 through December 30.
- Establish a no size or bag limit on togue, except that there would be a restriction on the harvest of larger togue, which could take the form of a higher "only 1 over provision", or a protective slot on larger togue that would only allow a single trophy to be harvested.

The proposed fall fishing initiative would increase togue harvest opportunity, which is a stated objective in the fisheries plan. Restricting the harvest of larger, older togue is an effort to establish a "biological control" in the population

that is believed to be important in limiting togue abundance. Removal of larger individuals from long standing lake trout populations in Idaho is believed to have caused togue population explosions and associated management problems for other coexisting sportfish. Encouraging the recreational harvest of younger individuals in Sebago, while enhancing the older age structure in the population to exert biological control should negatively influence total reproduction, fecundity, and overall togue population size, which will reduce total predation pressures on the smelt population, so critically important to salmon. If successful, togue anglers will have fewer lake trout to catch, but they will be of much larger size quality. In addition, the salmon fishery will be enhanced by a greater abundance of smelt and associated improvements in salmon abundance and size quality.

At this time, it is unlikely either proposed regulations could be promulgated to appear in the 2008 open water fishing lawbook, however, we are attempting to advance the fall fishing provision for the 2008 open water fishing season, but it will not appear in the open water fishing lawbook. We will conduct public outreach to get the word out if the new regulation is adopted. The regulation dealing with togue lengths and bag limits will not be advanced for the 2008 open water fishing season and still needs more public discussion. If approved, new size and bag regulations for togue regulation could become established in the 2009 open water fishing lawbook.

"Rubber Worm" Ingestion Study

It is rather commonplace for anglers to report the presence of plastic/rubber lures (typically used for bass fishing) in the stomachs of harvested trout and salmon. In fact, I observed one rather large lake trout that was caught on Mousam Lake (Acton) that contained 18 rubber items. We are not certain of the fish health risks associated with the ingestion of these artificial items, and there are no apparent studies that have been completed on the topic that we're aware of.

Recently, a limited investigation was undertaken by the Department to examine the potential health impacts to fish that result from the ingestion of rubber/plastic baits. The Department's pathologist, DVM Russ Danner, in cooperation with Dr. James Chacko located at Unity College, spearheaded this research project. In a laboratory setting, spring yearling brook trout (9 – 11 inches) were fed a commercial trout diet containing a free choice assortment of plastic lures over a 90 day period. Growth was monitored in the test group and compared to a control group, which was not fed plastic lures. Brook trout readily ate the soft plastic lures. At the conclusion of the study the lures were recovered from the stomachs of 63% of the test fish stomachs. Several fish stomachs contained multiple lures. 12.5% of the fish had consumed more than 10% of their body weight in soft plastic lures. Fish that consumed soft plastic lures lost significant weight during the study, had a significant decrease in condition factor, and began displaying anorexic behaviors.

The management implications of this investigation suggest that ingestion of plastics may negatively influence salmonid growth rates and reproduction. Furthermore, ingestion may also result in behavioral changes that may suppress feeding behavior, and reduce vulnerability to capture by anglers.

Based on the findings of this recent investigation, an additional investigation is being discussed, where larger trout will be monitored over a longer period of time. If a future investigation is pursued a greater effort will be made to quantify behavioral changes. We are hoping to partner with Southern Maine Community College in pursuit of this second laboratory study.

These plastic lures were recovered from a 20" brook trout caught on Noname Pond during the winter of '07, only 2 months after stocking.

Speck Pond Reclamation Brook Trout Enhancement Project

Department staff chemically reclaimed Speck Pond in Norway with rotenone, an organic piscicide derived from roots of certain tropical/subtropical plants. The goal of the project was to remove invasive fish (chain pickerel and golden shiners), and re-introduce native brook trout. The project involved the use of several new techniques required to meet Department of Environmental Protection permitting conditions (i.e. pond draw down, surface and deepwater injection, and post treatment monitoring). All in all the project went quite well; however, based on our experiences we hope to tweak some of the techniques and equipment to improve future projects. Regional staff will conduct additional monitoring on Speck Pond in the spring of 2008 to

determine whether or not the treatment was successful. Brook trout, a native of the drainage, will be reintroduced in the fall of 2008. If all goes well, we would expect the pond to produce some improved fishing for brook trout by 2009/2010.

Auburn Lake Open Water Angler Survey & Fall Salmon Survey

Our seasonal census clerk, John Zwetsloot, interviewed anglers at Auburn Lake during most of the open water season to collect information on this important regional fishery. A partial summary of his efforts is presented in the table below.

Auburn Lake Angler Survey Summary, 2007

No. Parties Interviewed (Anglers)		488 (923)
Hours Fished		3,884.8
Average Trip Length		4.24
# Legals Kept	**LKT**	**LLS**
	111	40
# Legals Released	330	90
# Sublegals	81	79
Hours/Fish	6.4	17.2
Average Length (in)	22.4	20.6
Average Weight (lb)	3.71	2.6
Average Condition	0.88	0.81

The survey included 923 anglers, and on average those anglers boated about one trout or salmon per fishing trip. That's relatively fast season-long action for trout and salmon! Of course, in reality many anglers had fishless days, while other more experienced anglers boated multiple salmonids per trip. There's a lot of truth to the old saying, "10% of the anglers catch 90% of the fish."

Most of the harvested lakers and salmon were in the 20-23" size range, and weighed between 2 1/2-3 3/4 pounds. The overall condition of the harvested lake trout was typical; however, the condition of the salmon was considerably lower than it has been in recent years. This information combined with anecdotal reports of a poor smelt run last season suggests smelt abundance may be down in the lake.

Basin Pond Outlet Stream was sampled again this past fall to monitor the adult landlocked salmon from Auburn Lake that enter the inlet to spawn. Fifty salmon were collected, and as noted above there was a decline in mean length, weight, and condition over previous years (See table below). We will continue to monitor salmon condition each season, and may consider some stocking reductions if we do not see an improvement in smelt abundance in the near future.

Mean Length, Weight, and Condition of Adult Landlocked Salmon Netted at Basin Pond Outlet Stream.

Mean	Year					
	1999	**2002**	**2003**	**2004**	**2005**	**2006**
Length (in)	20.3	21.1	21.7	20.4	20.2	18.5
Weight (lbs)	3.1	3.5	3.8	3.5	3.3	2.1
Condition (K)	0.98	1.03	1.00	1.08	1.06	0.86

Search For New Brown Trout Strain

The Department's current statewide brown trout management plan identifies and prioritizes management concerns that limit the successful management of brown trout in Maine. The concern identified as the highest priority for investigation and resolution relates to the genetic health of our current hatchery strain of brown trout. The genetic variability of the brown trout brood stock at New Gloucester Hatchery was tested and found to contain very low variability. This condition raises concerns that genetic information may have been lost over time, which may compromise field performance of stocked brown trout. A special Department committee was formed to identify new strains for testing in Maine, and if all goes well, two new strains of brown trout will be brought into the State's hatchery system for testing in the fall of '08.

Region A's Noteworthy Fish List

Below is a list of just a few trophy fish caught in Region A waters during the past fishing season.

Angler's Name	Weight and Fish	Location
Mike Sturgeon	20 lb togue	Colcord Pond
Mitchell Bragdon	6 lb largemouth bass	Songo P.
Paul Stone	6.75 lb salmon	Sebago L.
Spencer Smith	5 lb largemouth bass	Sebago L.
Brian Labreck	10.25 lb Cusk	Sebago L.
Brian Labreck	5 lb lake whitefish	Sebago L.
David Landergren	6.37 lb salmon	Crooked R.
Dennis Doughty	22 lb togue	Kezar L.
Gary Wilson	15.27 lb togue	Sebago L.
Gary Wilson	2.75 lb Black Crappie	Sebago L.
Gilman Cole	6 lb smallmouth bass	Saco R.
Jim Morrill	8 lb salmon	Sebago L.
John Reilly	7.33 lb salmon	Sebago L.